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Office of the Chief Financial Officer

Center for Environmental Finance

*Meeting Summary of the
Environmental Financial Advisory Board (EFAB)
May 22 - 23, 2012*

The Westin Hotel
Alexandria, VA

The minutes that follow reflect a summary of remarks and conversation during the course of the meeting. The Board is not responsible for any potential inaccuracies that may appear in the minutes. Moreover, the Board advises that additional information sources be consulted in cases where any concern may exist about statistics or any other information contained within the minutes.

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Day 1: Tuesday, May 22, 2012

Introductions and Opening Remarks: Mike Shapiro, Designated Federal Official; Karen Massey, Acting Chair; and Joe Dillon, Director, Center for Environmental Finance, EPA

Mr. Shapiro opened the meeting at 1:45, noting that this is the first in-person meeting convened since the appointment of our new members (the previous one was virtual). He welcomed the newest member, Eustace Uku, and invited participants to introduce themselves. Karen Massey volunteered to serve as acting chair.

Ms. Massey welcomed everyone and thanked new members for volunteering. EPA needs their voices and thoughts, but, she cautioned, this is a working board. She announced that this meeting is Gregory Mason's last, as his membership term expires.

Mr. Dillon: Of the 24 members on the Environmental Finance Advisory Board (EFAB), all but 2 are here. The fall meeting was convened via Webcast. He acknowledged the university finance centers and their work on state and local issues. Representatives of eight finance centers will be present today. Mr. Dillon thanked board members who participated in the sustainability listening sessions, particularly regarding the direction EPA should take in response to the recently released National Academy of Sciences report, *Sustainability and the U.S. EPA* (2011). The work group on Transit-Oriented Development (TOD) will meet in this room on Thursday. They have done a tremendous amount of work to get 15 financing and advocacy consultants to present their findings and opinions on how to pay for TOD. Mr. Dillon then introduced the first speaker, Barbara Bennett, EPA's Chief Financial Officer.

Technology Innovation: Barbara Bennett, Chief Financial Officer, EPA

Ms. Bennett thanked EFAB participants and welcomed the new members. EFAB is an important board for EPA, which seeks their counsel, advice, and viewpoint. Environmental technology and investment in it are priorities of Administrator Jackson. The EPA Roadmap can be found at <epa.gov/envirofinance/innovation.html>. It will aid EPA in making a plan to promote environmental innovation.

In 2010, the Administrator broached the idea of partnering with the private sector, including the business community. We need dialogue on what EPA can do better. In the regulatory sector, we want to be sure that sound environmental policies are driving innovation.

Last week, EPA held its first environmental technology summit, the Technology Market Summit. EPA tried to bring together leaders in government, academia, industry, and the investment community. Not only did Administrator Jackson attend, but also Secretary of

Agriculture Tom Vilsack, Secretary of Commerce John Bryson, and the U.S. Trade Representative, Ambassador Kirk.

To maintain open dialogue, Deputy Administrator Bob Perciasepe and Ms. Bennett convene quarterly conference calls, the next probably in July. EFAB members will be invited to join in them.

Encouraging investment for good market returns is something different for the Agency; the Roadmap creates a structure for the Agency to do it.

Q&A

- *William Cobb* asked whether the content of the quarterly conference calls would be posted on Web site; *Ms. Bennett* will follow up.
- In response to *Chiara Trabucchi*, *Ms. Bennett* said the Summit had been video-conferenced through 10 regional offices. Some offices convened side meetings, e.g., one went off site to a particular company. The webcast can be viewed at epa.gov/envirofinance/2012summit.html. Some regions are more active than others. People were surprised that EPA did this sort of thing and that it wants to engage with the private sector.
- Responding to *Greg Mason*, *Ms. Bennett* said she finds a lot of interest in what EPA is doing, but one thing she hears is what a leader EPA is internationally—foreign countries look to EPA when setting their own standards. Furthermore a resounding theme last week—whether from investment banks, non-governmental organizations (NGO), or corporate companies—was that they, too, are looking to EPA to come out with these rules. The talks were not coordinated, but the same themes emerged throughout. EPA is seen as a scientific organization and is looked to as a standard bearer.
- *Eustace Uku* wondered whether EPA would assist companies in an aggressive international environment, e.g., China. *Ms. Bennett*: The President announced a joint initiative on this sort of thing last week. EPA must facilitate such initiatives so that US companies have a fair chance. EPA also announced availability of a portal.

Report Out: Tribal Environmental Programs: Bill Cobb, Work Group Chair, and Gavin Clarkson

Mr. Cobb began by stating the importance of making tax-exempt bonds available to the Tribes to finance municipal projects. A draft position statement will be distributed to EFAB members for review. *Mr. Clarkson* pointed out that, while some are very wealthy, many are not, and some are living below the poverty line. There are many unmet infrastructure needs throughout the Indian nations, e.g., the Navajo Nation is the size of West Virginia but has only 2000 miles of paved roads. A number of challenges are unique, such as Congressional neglect or hostility. To get government projects done,

governments sell bonds. Is a tribal bond the same as a municipal bond? According to the Tribal Tax Status Act, Tribes, as sovereign governments, should be able to access the same tax-exempt financing that other governments have. But acting on this has been impeded by a Tribe-hostile congressman, and less than 1/10 of 1% of tribal money is tax-exempt. An accessory problem is the nebulous nature of the Tribal Tax Status Act in stating that tax-exempt bonds can only be issued if a government function is being done by the taxing authority; there is no guidance on what that means. This is a major reason the Tribes have such an infrastructure deficit. A project might be affordable at 6% but not at 10%. The Internal Revenue Service (IRS) was to enforce this statute.

As part of the stimulus bill, the Department of the Treasury was asked to investigate this issue. They declared it unfair and recommended that the function test be repealed. They recommended that Tribes be treated the same as state and local governments so they can get infrastructure financing. When Mr. Clarkson looked into the matter more closely, he found that Tribes are 16 times more likely to be challenged on the use of bond money. For example, a Tribe in eastern Oregon that wanted to increase its water-treatment capacity was prohibited from selling what they didn't need, whereas state and local governments often do this. The IRS decided that selling extra capacity was not a government function and challenged the tax-exempt status of the bonds. In another example, the Las Vegas Paiute built a golf course outside the city, but the IRS challenged the tax-exempt status of the bonds used because it was too beautiful.

In sum, this is a \$50 billion problem, and the need is great. It offers an opportunity for EFAB to craft a letter to the Administrator supporting the Treasury's position. Mr. Clarkson will distribute a one-page statement of the problem and the Treasury recommendation, which has been endorsed by all 565 Tribes and other related organizations. The Treasury's position was stated last Tuesday in the Senate Finance Committee.

Mr. Cobb reported that the work group's second pending charge from the Agency— financing for environmental projects – was deferred, although the tax-exempt-bond issue is specific to that charge. Each member's packet contains the formal report for the charge; however, it is now out of date, so the work group revised and improved it. This is an update of what *Mr. Cobb* articulated in October. They are trying to survey nine tribes to understand barriers and opportunities for financing environmental programs. They will do a pilot project in Regions VI, IX, and VIII. Regional Finance Center representatives will take the survey to the Tribes and return the results to the work group. If Tribes are resistant or things emerge that indicate the need for rethinking or changing, the EFC representatives will provide that information to the working group. By the fall session they will have some results to report.

Mr. Cobb noted the need for more work group members; only four members remained.

Q&A

- *Chiara Trabucchi* wanted an opinion about whether making such recommendations was within EFAB's purview. Articulation of the linkage to a

- specific charge would be quite important. Designated Federal Officer *Mike Shapiro* will check with the Agency's lawyers. The Board has presented letters to the Administrator, and this would not be novel, but it raises some additional questions.
- *Ms. Trabucchi* stressed the need for the underlying objectivity in a letter like this. In order to concur with the work group findings, she needs to know more about the issue and what research and investigation has gone into it. EFAB members need a report to review, so they don't accidentally counter other agencies. She would like to slow the process a bit to understand the charge and analysis and have the opportunity to ask questions to be sure the Board uses its power and weight objectively. Such a letter must also be predicated on the how-to-pay issue for any charges to EFAB. *Mr. Clarkson*: Discrimination against tribes actually costs money, and repealing this law would increase revenue. In addition to the one-page draft, he will send background material. *Ms. Trabucchi* doesn't disagree; she just doesn't know enough about it. *Mr. Clarkson* noted that an article has already been published, so the letter would be part of a larger entity.
 - *Heather Himmelberger* thought a strong connection should be made for why this topic is germane to the work of the Tribal Environmental Programs Work Group. We should look for ways for Tribes to develop self-supporting, self-sustaining, self-financing funding mechanisms. The work group was specifically asked to examine barriers to those activities. *Mr. Cobb*: The work group had two charges: they addressed the charge on environmental programs, and deferred the other that deals with environmental projects. The letter is an interim step. Information is available. The issue is that we don't have a year to analyze it.
 - *Mr. Shapiro*: The process is that the work group circulates its analysis and the recommendation. EFAB could start the process of getting a sense of participants' opinions and whether they want to focus on this issue for the next several months. We can decide whether to take up this issue based on the recommendation of the work group and use a written process to discuss it over the next several months.
 - *Sharon Dixon Peay*: As for the question of process, the report EFAB members will see does not focus on this particular issue. The work group wants the board to endorse the recommendation.
 - *Blanca Surgeon*, a member of this work group, said they have been working on this issue, which adds the timing factor. This is an opportunity to create revenue, and the timing is now. To wait another year or 6 months would put people and projects further behind. All Tribes and other agencies support the position, the research has been done, and information and examples are available. It is not a controversial issue; just a matter of members informing themselves.

- *Ms. Massey* asked where the issue stands legislatively. *Mr. Clarkson*: The Senate Finance Committee met last Tuesday; this is part of overall tax reform. Part of the pilot was for Treasury to do the study and now the Senate Finance Committee is taking it up. The report from Treasury resulted from stimulus finance legislation. It is hoped that Congress will take up the legislation this summer. The work group isn't asking that a letter be signed today but ultimately wants EPA's voice to stand with Treasury's. The two pieces of supporting information are Mr. Clarkson's article and Treasury's recommendation.
- *Leanne Tobias* agreed with Mr. Clarkson's position. Tribes, at the moment can issue revenue debt, but not tax-exempt debt. Congress is talking about giving Tribes parity with state and local governments, and this is something EFAB should support. As for time frame, taking until August could render the group's position irrelevant. At the same time EFAB members don't want to feel railroaded. Could it be discussed by e-mail after the material has been circulated? This is straightforward remediation of a long-standing inequity.
- *Ms. Trabucchi* was concerned about process. She wants to hear what legal counsel thinks about the appropriateness of circulating such a letter. And, if timing needs to be accelerated, do all board members have to concur? Congress undertook its discussion last week and is engaged in it. We need to be careful about what EFAB recommends and such recommendations should be based on objective research and analysis. A draft letter should be circulated so we have something concrete to look at. *Mr. Shapiro* suggested that these things be done in parallel. Furthermore, because this is an election year, everything is likely to work more slowly, so if EFAB takes more time, it may not be problematic. *Mr. Clarkson* reiterated that the letter endorses Treasury's recommendation and is not a piece of legislation.
- In response to *Wayne Seaton*, *Mr. Clarkson* explained that the pilot program was moderately successful but was not targeted toward environmental projects—only “shovel-ready” municipal projects. Small amounts were allotted to many Tribes, but many of those received less than 40% of what they anticipated. This failure was more a function of the allocation process, which the Treasury Department recognizes and is revisiting.
- *Mr. Uku* asked if it would be possible to have a draft that was as final as possible to circulate to EFAB membership. Then a vote could be contingent on resolution of the process issues. *Mr. Clarkson* has a one-page draft.
- *Lindene Patton*: According to EFAB rules, especially #5, this committee cannot advocate to anyone outside EPA. We need legal advice about the legality of circulating such a letter. If we wrote a letter to the Chief Financial Officer's office, that office could send it to the Administrator, who could make the recommendation for EPA to endorse the position or not. *Mr. Shapiro* reported that

EFAB routinely sends letters to the Administrator and assured everyone that any letter will be subjected to multiple reviews.

- *Mr. Shapiro* asked whether members agreed that we should proceed in parallel to be sure we have the legal dimensions correct while the work group drafts a letter and accumulates documentation. If there is no legal problem, the letter will be circulated to the full EFAB. Timing will be driven by the time it takes to draft the letter.
- *Ms. Himmelberger* noted that a few years ago EFAB was similarly asked to comment on Better America Bonds. She suggested that EFAB find out how that was done.

Environmental Finance Center Network: Sarah Diefendorf, EFC President, and Heather Himmelberger

Ms. Diefendorf and Ms. Himmelberger are the longest sitting directors of the Environmental Finance Center (EFC) network. They have been expert witnesses since EFAB began, and each has served as president twice. Each EFC is connected to a university and represents different programs at the universities—engineering, business, public administration, public service, architecture, agriculture, social sciences—and they represent all EPA regions. EFCs perform the on-the-ground work for the higher-level discussions undertaken.

Ms. Himmelberger: Funding is a big issue for EPA. The EFC started in 1992. Now they get core grant funding from EPA's Center for Environmental Finance, which is split evenly among the EFCs. They leverage that money as much as possible. They work in every environmental medium and at every level of government and can see all the connections. This is a way to leverage funding with other activities. Core grant funding opens new technologies and ways of doing things. The expertise at the table can access many communities and can promote EPA tools. They are collaborative colleagues, so it's a network instead of isolated groups doing the same thing. States still want to know what's happening even though travel money for staff is limited, and EFC can bring services to local governments that are disadvantaged. Core grant funding is investment into broadening EPA's programs and other activities.

Ms. Diefendorf: EFAB has come full circle. The board started out looking at environmental technology investment capital and, based on Ms. Bennett's presentation, may do so again. *Ms. Himmelberger* noted that Joanne Throwe had leveraged \$3.2 million in Smartway funds from EPA by going to terminals, state agencies, and private companies offering truck replacement programs at ports if they would buy into it.

Ms. Diefendorf: Core grants allow us to work together, e.g., EPA teamed with the Department of Housing and Urban Development (HUD) and the Department of Transportation (DOT) to issue challenge grants to communities. They wanted capacity-building intermediaries to submit grant applications, e.g., a water initiative. At a recent

meeting, water was not on the agenda, but Ms. Throwe convinced them that it would be a good addition.

Jeff Hughes thought a useful mechanism is to tell a small community they will be a case study, and use core funds to help that particular community. Then go to a professional association to distribute tools.

Ms. Diefendorf: In California, a small grant and an EPA core grant were matched so the business community worked on reducing greenhouse gases. They brainstormed how to make their city more environmentally sustainable—solar specialists for homes, windmills in back yard, etc.

Ms. Himmelberger: When EPA needed a strategy for the Tribes in 1996, they convened a meeting to talk about the set-asides, and representatives of 19 of 21 New Mexico Tribes attended. They got small core grants for the Tribes to match. That grant is routinely re-competed. Competition is open and the EFC is hired back only because they're the best qualified. *Ms. Diefendorf*: One good thing about an EPA core grant is that it is not prescriptive. It lets people become cutting edge by trying something they would not ordinarily be able to try.

David Eberle: Enterprise Server has developed a dashboard for sophisticated financial tools for the National World Water Association. Rural communities can upload financial documents via Excel (previously it was individual; the next generation allows access to all drinking water systems in the state). It allows more efficient budgeting and develops a better picture for public policy.

Sam Merrill: In southern Maine, they are working with base funds. The real university asset is convening stakeholders to address a chronic or acute financial problem. They focus on adaptation, particularly concerning sea-level rise and storm surge. Having software to assess risk mitigation would give tremendous return on investment. We need to know how much loss an activity is likely to prevent. Then include cost benefit and community visualization efforts and state climate transportation activities, such as bridge repair.

In New Mexico, where *Ms. Himmelberger* works, someone told her this is the best thing EPA has ever done, and she hopes EPA will continue to support the EFC network; they provide good value for EPA.

Report Out: Transit-Oriented Development: Phil Johnson, Work Group Chair

With tight budgets for everyone, the question is how to involve the private sector, e.g., leveraging pension funds, where managers are looking for long-term investments. Washington, DC has about \$20 billion in construction, transit-oriented development (TOD), e.g., shopping centers are being torn down, and buildings are being replaced. We need to bring together a key group of practitioners in finance development, real estate, etc. to lay the groundwork for models developed and recommendations that emerge.

Initial conversations indicate that creating sustainable communities is a key component. But, the question of how to finance it remains. Could tax-exempt bonds be used, or new instruments of financing?

EPA is involved in the process of smart growth, but it is a new era of financing and sustainability, green technology and replacing old TOD projects, e.g., traffic is declining in all cities (the economy is down, while gas prices remain high), so TOD will become even more important. EPA is part of a federal task force, along with HUD and DOT, established to look at the issue of sustainability of communities. But, the three agencies have three processes and three sets of rules. The DOT Work Group will look at models for how to coordinate the agencies and discuss the roles and responsibilities of project participants, availability of funding, and incentives. We will try to incorporate what we learn from tomorrow's workshop and create models.

The workshop will host presentations from some 20 TOD experts. It will be held Thursday from 8:00 AM to 5:00 PM. Mr. Johnson invited EFAB members to participate.

Summary of Day 1: Karen Massey

Several points became evident:

- Ms. Bennett's talk indicates that EPA is putting money where its mouth is.
- Market-based solutions are exciting.
- The diversity of the work groups is reflected by the two work group report-outs.
- Process does matter. We need to be aware of how our mission as a board fits what we do.
- We are passionate about our subjects.
- Some work groups need more people.
- Thursday's workshop promises to be good.
- EPA is funding EFC networks as an investment.

Mr. Shapiro reiterated Mr. Cobb's plea for additional volunteers for the Tribal Environmental Programs Work Group, one of the most challenging areas. It illustrates that, as a board, we have to reflect that issues arise beyond our control and the time available.

Mr. Shapiro adjourned the day's session at 4:40 PM.

Day Two: Wednesday, May 23, 2012

Opening Remarks: Mike Shapiro, Designated Federal Official

Mr. Shapiro opened the meeting at 9:19 and announced that Mr. Perciasepe, EPA's Deputy Administrator, had to cancel his presentation today, so the agenda was revised to make best use of the extra time.

Report Out: Clean Air Technology: Sharon Dixon Peay, Work Group Chair

Since the last meeting, the work group has completed a letter, which followed months of collecting views of companies impacted by the boiler Maximum Achievable Control Technology (MACT) standards. These followed work EPA was already doing with the Department of Energy (DoE) and the University of Southern California (USC). A change in the publication of the rule, so that it would have a different impact on the companies, required a pause to clarify their task. The letter expressed concerns and recommended things the Board thought EPA ought to do. The work group could continue to work on recommendations for financial incentives. Boiler rules coming out would require closer attention to compliance. There are some issues with rules being put in place and when they were put in place. Many are privately owned companies, and it is important for EPA to continue coordinating efforts with other agencies, e.g., DoE, to help companies comply. Gina McCarthy, Assistant Administrator for EPA's Office of Air and Radiation (OAR), thanked the work group, said OAR was looking at various solutions, and wants the work group to continue to review financial incentives to get companies in compliance with these rules. At that time, it was not known when these rules would be put in place; after they are, the group could work on outreach.

The new rule was sent to the Office of Management and Budget (OMB), and the White House is reviewing it. There is some movement on actual promulgation of the rule. Joe Bryson is involved with EPA and DoE on outreach. They have done quite a bit of analysis and have identified 400 companies that will need the most help to enable them to comply. The work group has access to this body of information. Following discussion, they plan to get information from DoE coinciding with the list of companies they have already reviewed. Their work will likely enhance the work this group has already done, which is quite detailed, including, e.g., the age of facility, cost of operating facility, and comparison of DoE's three options to meet the new rules—combined heating, emissions limits, or using natural gas. The work group discussed time to prepare one or two case studies to review opportunities that relate to DoE's alternatives to reduce emissions and comply with new rules. The rule is likely to appear at the end of June. All of this will support their work in outreach, and they will contact the 400 companies.

Q&A

- In answer to *Mr. Shapiro*, *Ms. Peay* said DoE's outreach involves four regional centers. They have resources to hire people to contact the 400 companies. Site

visits will confirm that their information is correct. Analysis is to be used to help a company narrow its choices to make a decision on a mechanism. The work group is looking at that information and will help evaluate potential options. EPA has decided that it is most efficient to partner with DoE, but the work group's client is still EPA. *Mr. Shapiro* observed that financing analysis is part of the toolkit DoE uses.

- *Mr. Cobb:* EPA is considering outreach; DoE has technical analysis, and EPA has financial analysis. Our shift is, “Is there a financial solution?” OMB had similar questions. Combining technical and financial information will result in more effective outreach. Many companies are small and do not have sophisticated technological or financial processes. *Mr. Shapiro:* DoE is already outreaching to 400 companies. Will EPA outreach separately? *Ms. Peay:* The primary, but not the only, outreach will be through DoE because they have the resources and infrastructure to progress from assessment to the actual project. It allows EPA to move to the next level. We just need to marry the analysis with the financial side.
- *Mr. Shapiro:* If something looks like the better option, can you finance it? Is the connection with DoE set up? *Ms. Peay* talked to Joe Bryson, who will talk to his DoE contact. He indicated when and how the work group will get the information. Once we have it, we will set up a call to discuss it with DoE. It should be possible to have something drafted by the fall meeting and finished by the March meeting.
- *Ms. Massey:* This group has struggled to find its purpose. EPA and DoE have undergone a good amount of coordination, and we can get the financial information into their hands. Through EPA, a meeting should be set up with the finance community, a secondary recipient of information.
- *Thomas Liu:* Information like this still requires a marketing effort. We are talking about corporations, mom-and-pop shops, universities, etc., but financial incentives can unite all these interests—it's low-cost money. Many companies are also financially challenged. They are worried about survival, not just about meeting new standards. Financial analysis has been conducted with some of the companies, and the information the work group has already gathered will be added to the DoE database.
- *Ms. Peay:* Once we receive information, we'll be able to produce something fairly quickly. She thanked the EFAB support staff and the committee members.

This is *Greg Mason's* last meeting. *Mr. Shapiro*, noting that as a real-world practitioner *Mr. Mason* had kept the EFAB grounded on what was being proposed, recognized his contributions by presenting him with a plaque.

Report Out: Drinking Water Pricing and Infrastructure Investment: Scott Haskins, Work Group Co-Chair

The work group's charge acknowledged the background of declining per capita revenues, aging infrastructure, and difficulty in dealing with the revenue gap as expenditures increase and per capita water consumption declines. The work group had its first meeting and several calls to shape the topic. They observed that what's different is not aging infrastructure or regulatory issues, but the declining revenue gap. Other aspects are the toolkit of leading practices on pricing and infrastructure, stakeholder communication, capital planning and management, and lessons learned from other industries. They will identify for EPA the kinds of alternatives available for the utilities, ongoing research efforts, and the kind of role and opportunities EPA has to educate, communicate, and guide on this issue.

Jeff Hughes is leading a water research project, which follows other research. Best practices have been developed. This research aims to find new financial approaches and paradigms, new methods of reducing risks of this revenue variability. The charge addresses how water utilities can meet their increasing water requirements with declining income and aging facilities. Risk management is critical. They want to give EPA a product useful for education and training, but they are also interested in furthering a recommendation on guidance. What will enable utilities to deal with the challenges? Mr. Hughes asked for feedback. The Water Research Foundation engaged the University of North Carolina to do similar work in parallel with EFAB, which involved George Raftelis and the finance team. The Center for Economic Forecasting and Analysis was engaged as a partner, and they began working with a few states on financial metrics, with rating agencies acting as consultants. They talked about and shared databases and partnered with utilities. The big concern is whether the revenue will be there when needed. They are seeing significant per capita drops in water usage, so people are concerned that they will have revenue to meet existing need. Pricing is the obvious vulnerability. Much analysis will be done with the utilities, e.g., annual trends for droughts. Many companies see 10 to 15% revenue swings from year to year, but fixed cost structure, and this is expected to become more pronounced in the future. Other concerns are pricing and finance policies—have the utilities identified metrics they want to measure, get policy for, and perform against? Another is debt service coverage—do those with a higher percentage of coverage have higher revenues? We need feedback from stakeholders on how utilities do their pricing.

Mr. Hughes invited EFAB members to send information on pricing. Much has not changed—they still sell water gallon by gallon, but do not pay costs dollar by dollar. They find that 80 to 90% of revenues to utilities are gained by variable structures, but 90% of costs do not change. That rate structure is bound to change. Who would be winners and losers? The work group will send out proposals and invite feedback.

Q&A

- *Eric Draper:* Much is evolving from forms devised a few years ago. There is a mixture of investor-owned and government (municipal systems, authorities, etc.) entities. Any form depends on the operating environment of the government structure. Then there's the customer base. Suburban water utilities have different risk profiles than urban ones, so we need to consider customer profile. e.g., where they pay a dividend, they have an incentive to increase prices.
- *Mathilde McLean:* How are bond-holders protected? Some utilities don't set their rates annually. We need to review frequency of rate setting.
- *Mr. Liu:* The government perspective entails layers of approval, and many of those officials are elected. But sometimes rates and charges tend not to be attached to anything. Increases range from two to nine percent, so there may be no political support for something that is double digit. But there may also be a problem of perception. We also see rate increases over an extended period.
- *Ms. Peay:* There is a constraint on utilities for getting these things done. She was not sure they were differentiating between normal and special rate increases for capital improvement, or differentiating between government levels, e.g., tiny authorities versus large ones. Both relate to reduction of revenue sources.
- *Mr. Haskins:* Co-chair Rick Giardina and he will revise the outline, get work group approval, and distribute it to EFAB members for their input. A few people have expressed interest in joining the work group. They expect to have a draft ready by October, with interim milestones for the work group.

Implementing Sustainability at EPA: Bicky Corman, Deputy Associate Administrator, Office of Policy, EPA

The Office of Policy reviews all EPA regulations and supports the Agency in economic analysis and climate adaptation. It also contains offices that manage voluntary programs, such as the Office of Sustainable Communities. They are now engaged in helping the Administrator prepare a response to the National Academy of Sciences' *Green Book*. The *Green Book* responds to the Administrator's request for a report in the fall of 2010. It follows the Academy report called the *Red Book*, which provided recommendations to EPA and other agencies on the use of risk assessment and a management framework for all research and decision-making. The new report will determine whether it is time to shift from risk assessment, and consider sustainability and other factors. A new approach would recognize the fact that the more egregious environmental problems have been remediated (e.g., rivers no longer catch fire). So, how do we, or should we, catch the sustainability aspect and apply the new tools available? For finance, we are shifting to other areas. How does it fit with other development planning and how do we engage it. All agencies are under an Executive Order to consider sustainability in their operations: How much energy is consumed by employees going to and from work? How much energy is consumed in photocopying? How big is the external footprint? Regulations are one way we interact with the external world, as well as with provisions of technical and

financial assistance, partnerships, etc. So beyond EPA's own operations, how do we figure out how best to engage or interact on sustainability with the rest of the world?

The *Green Book* said EPA should incorporate sustainability and offered 29 recommendations for how to do that. EPA has convened many consultations, including EFAB and the National Advisory Council for Environmental Policy and Technology (NACEPT). Through a stakeholder session on information disclosure, they found that EPA should issue sustainability reports to inform investors and community members. The Global Reporting Initiative is a voluntary system for companies to report how much energy or water they are using. Meanwhile, companies are being drowned in requests from buyers for this information. Stakeholders said that EPA needs to clarify vendor information requests, so that it will help the companies be competitive.

Another example of areas for assistance is giving a better understanding of natural capital. Now our tools do not address that sort of thing as robustly as they might. We could provide information on our Web site that would be useful for investors. Interest in this information is at corporate as well as facility level. What kind of support can be offered for green infrastructure, e.g., SIMS Recycling Solutions (SRS), information on how to access financing information. As for financing at the municipal level, in the District of Columbia, Property Assessed Clean Energy (PACE) financing is used at the commercial level. A huge issue is how to afford all the things we need and want to do. One of the most powerful things at the EPA level is to "walk the walk." However, we may not be availing ourselves of S codes, etc. as DoE does.

Q&A

- *David Eberle:* The questions to struggle with at the local level include: If sustainability is defined by regulations, what about the environment? What is the definition of ecological sustainability? This is difficult to answer because the environment doesn't have bounds. What is a sustainable ecosystem in an urban environment? How do we articulate that in outreach efforts? We confront this in local public hearings when we want to exclude humans from certain areas.
Ms. Corman: That's one thing EPA will be working on. The definition of sustainable used by the President in his Executive Order is: "using resources today in a way that they will be available for future generations."
Mr. Eberle: This is more complex than time, value, or money in an ecosystem. How do we explain to the public, why they can't build their house in a particular area or can't put waste in the storm drains? We need support to explain why we implement what we do.
Ms. Corman: Many others also want to know the best way to communicate these things. Ultimately, it should make implementation more efficient and reduce the number of regulations at each stage. At the community level, we need to explain how this will improve people's quality of life—more parks, shorter drive to work, etc.
- *Cynthia Williams:* Who wants better tools for valuing services? Companies are drowning in requests for information. The Global Reporting Initiative (GRI) was developed over many years. Investors want information in an aggregated

- company-by-company framework. It would make sense for the EPA and the Securities and Exchange Commission (SEC) to work together. How has SEC guidance affected EPA? *Ms. Corman:* EPA's Office of Policy helped the SEC write guidance on company disclosures. She agreed that this collaboration is a good idea. Companies want more assistance in valuation when making internal investments. And these comments are being heard as well from sister agencies such as the U. S. Department of Agriculture (USDA) forest resource valuation and the Organization for Economic Co-operation and Development (OECD).
- *Sara Pesek:* What does it mean that stakeholder partnerships are cut for EPA? *Ms. Corman:* 2 HUD grants are involved in partnership issues. USDA and DOT are involved in robust partnerships. In stakeholder sessions, EPA was asked why the Department of Health and Human Services (HHS) was not involved. But, now we are talking to HHS and other agencies. We are working together to form the National Prevention Council. Just because HHS is not a formal partner doesn't mean we're not working with them. *Ms. Corman* is also the EPA representative for the Great Outdoors Initiative.
 - *Mr. Mason* asked what the major milestones would be in a strategy to achieve the 29 recommendations. *Ms. Corman:* EPA is still deciding whether to move forward with sustainability, recognizing that they are not the first to enter the sustainability arena, that corporations and municipalities are already there. EPA wants to know how to add value to their initiatives. What do they need to do to make it more coherent? How do we drive into our own culture a more rigorous approach to sustainability? Sustainability is assumed to be voluntary, but we must put that into a regulatory framework. It's not a one-off; this is part of our core. An example of a success story is the Kendall Generating Station in Cambridge, Massachusetts, which discharged hot water into the Charles River, potentially harming fish. They built a pipeline to get the excess heat to Boston, which lowered the temperature of the discharged water, cleaned the water, and improved conditions for the fish. EPA can change its own performance and get training to more broadly disseminate information.
 - *Mr. Hughes:* The main question at the local government level is how to pay for these improvements. It is fascinating to see what can be borrowed from the federal government—there are exciting finance mechanisms, but they are few. More typical for small government is grant financing. Sustainability is hoped to be self-financing, but sometimes it is not, even though it makes economic sense. Will sustainability be treated like safety and education, or like water and air? EPA should not give an oversimplified view that sustainability will pay for itself. Grant-financed projects are closing, and if communities are not willing to invest public revenue, those projects will not continue. The general resource pots are not flush now. *Ms. Corman:* The District of Columbia did a lot with American Recovery and Reinvestment Act (ARRA) money. Some 80 cities formed a voluntary network for exchange, and at the next level down asked EPA support to do the same. All asked what to do after ARRA funds disappeared. If a project is

not self-sustaining, where does the money come from? We must show why investments should be made.

- *Philip Johnson:* The EPA–DoE–USDA partnership is super-critical because they are the critical agencies for biofuels. The biomass-to-ethanol process is still in its infant stage technologically. The price of fossil fuels will make biofuel technical processes more affordable. Emissions are only one issue. Programs are trying to figure out the sustainability of growing crops for biomass and costs associated with growing, harvesting, building a plant to convert biomass to biofuel, and assessing emissions. All this has implications for the U. S. economy, and within 3 to 4 years, breakthroughs will occur in technology. These impacts have been determined for the benefit of commerce, e.g., Honeywell has the technology to create hydrocarbon fuel from wood, which implies that 40 million to 50 million acres will be devoted to wood biomass, which will pit the energy industry against the pulpwood industry. Such conflicts must be resolved. This is a critical issue, so these partnerships will be very important. And, if we reduce the use of fossil fuel, it will revolutionize the economy. Sustainability overall, as seen in this country, is working with communities on these issues, where the partnerships are substantial. To advance these ideas, we should get to the middle schools and involve the educational process. *Ms. Corman* stated that the NAS opined that the biofuel legislation would have benefited from a sustainability analysis.

U. S.–Brazil Joint Initiative on Urban Sustainability: Shalini Vajjhala, Special Representative, Office of the Administrator, EPA

In 2011, President Obama and Brazilian President Dilma Rousseff announced the U. S.–Brazil Joint Initiative on Urban Sustainability (JIUS). This partnership started with the cities of Rio de Janeiro and Philadelphia and reflects the priority both Presidents place on investing in infrastructure and sustainability.

Rio de Janeiro has daunting infrastructure problems, beginning with the difficult terrain, and including very poor coverage for water and sanitation services and high-levels of electricity loss and theft. In the next 4 years the city expects to put in approximately \$200 billion in infrastructure in preparation to host major events, including the 2014 World Cup final and the 2016 Olympics. The push represents an opportunity to create a template for investing in sustainable infrastructure. The city wants to scale up investments in infrastructure that will continue to have value in the future for the residents, rather than making short term investments only for the mega-events.

Because of the volume and diversity of infrastructure investments being planned, the City of Rio has the opportunity to serve as a new model for financing large-collections of small green infrastructure projects by bundling projects (either geographically or sectorally) in ways that can be treated as a single portfolio by investors.

With increasingly constrained local budgets and resources, many cities face challenges associated with leveraging private financing for energy, water, transportation, and other

infrastructure systems. For example, the City of Philadelphia recently announced a plan to replace their aging storm-water system with a 100% green storm-water system, but the city still faces serious challenges associated with financing this new system over the next 20 years.

Through the JIUS, EPA, along with local partners in Philadelphia and Rio, has been working to bring together and bundle sustainable infrastructure projects into large-scale portfolios and to mobilize investment in cleaner greener infrastructure. Municipal replacements, especially with green infrastructure, usually happen incrementally, but investors want things done at once in a single package. JIUS serves as a bridge to aggregate small, diffuse sustainable projects and create investable portfolios. To document these efforts, JIUS participants have developed a “cookbook” for a green economy with project recipes, finance mechanisms, and a menu of related policies (See: www.epa.gov/jius).

The JIUS has also been working to address “value capture,” one of the most important potential aspects of financing sustainable infrastructure. For example, a portfolio of food waste to energy projects can generate direct revenues but also reduce costs of waste collection and water treatment where cooking oil and food are diverted from wastewater treatment systems, thereby providing savings to the city. Neither the electricity department nor the water department typically has the incentive to develop such projects alone, but when a city bundles these types of electricity, water, and energy revenues and savings, the projects can form a viable large-scale portfolio.

Similarly, Philadelphia has an annual budget to repair flooded basements when its water mains break, but that money cannot be used for infrastructure replacement. By investing in green infrastructure that reduces flood risk and clean-up costs, the City has the option to capture the savings in its budget as an additional revenue stream. Value cannot be captured when these projects are done small bits at a time.

Another example from Rio de Janeiro is investment in redevelopment of one of the biggest landfills in the world, in which a community of some 1200 waste-pickers are being displaced in the process of converting the landfill to a Clean Development Mechanism financed methane capture project. By working with a wide range of partners, the JIUS has connected partners to generate an investable masterplan for the entire district, including components such as an electronic waste recycling facility and job training center for the displaced wastepickers.

The JIUS platform (launched at Rio+20) highlights how government can work with the private sector—knowledge partners, finance partners, and technical partners to take the experience and knowledge from Rio and Philadelphia to other cities and facilitate the development of new green infrastructure masterplanning approaches and financing strategies. JIUS is just one example of the creativity within EPA and the importance of collaborating with the private sector and communities to protect the environment while promoting economic growth, especially for underserved communities.

Q&A

- *Mr. Uku:* How does a city like Pittsburgh, with an annual operating budget of \$30 million to \$40 million for sewer services, tap into such a thing? *Ms. Vajjhala:* The JIUS is intended to serve as a model for cities like Pittsburgh by showing what policy, finance, and project-level entry points are available to a city. For example, you can start with where cities are losing money, e.g., traffic accidents in Pittsburgh that involve the health sector in addition to the transportation sector and stormwater management system, where additional investment in infrastructure could help generate revenues and reduce costs/losses.
- *Mr. Liu* had heard similar concepts discussed in other states where they talk about debt limits and recommend setting up a temporary special-purpose authority, e.g., New York City's authority to issue bonds during a past debt crisis. States can fund everything from computers to police cars to wastewater treatment. But, when you pool, how do you homogenize your credits? In the U. S., the benefit of issuing bonds is their tax-exempt status, but internationally that is not true. Since the financial credit crisis of 2008, investors are more critical but they don't have time to analyze all relevant data, so EFAB could recommend making more information available. *Ms. Vajjhala:* We've found many of these same issues in our work on the JIUS. The biggest problem is that investors are looking for project pipelines, but there is very limited capacity at the local levels for project preparation and evaluation. They are all doing tiny projects with locally available capacity and resources. We are talking about a model of portfolio finance on how to link funds and projects, but also create the delivery mechanisms and institutional structures for implementation. In the past, special-purpose authorities have been established: in Rio de Janeiro, they restructured the major port with a municipal corporation to issue bonds for 15-20 years. This new authority is working with federal banks to manage concessional land transfers and homogenize credits for new development. In many cases, there are no existing authority structures for delivering green infrastructure systems with cross-sectoral benefits, so we have been working with partners through the JIUS to identify the legal and institutional opportunities for innovation. Risk can be mitigated through government involvement. A large part of the risk is getting buy-in from communities, developers, investors, and governments, and we are trying to find the middle ground.
- *Ms. Patten:* The cost-saving theory is similar to privatization. She wants to understand the more detailed components, such as interactive cost-saving opportunities. Her experience in terms of insuring privatization is that to be effective, we need contractual changes with the labor force and underlying providers, but more important, we need a culture change. Implementation was the killer. *Ms. Vajjhala* agreed that culture change is crucial. Reinsurance and climate finance mechanisms offer models. JIUS partners have definitely encountered some contractual and procurement issues, but they are tackling these issues portfolio by portfolio. In Rio de Janeiro, the greatest potential benefits associated with investment in water infrastructure are reduced landslide risk and incidence.

- Part of the Civil Defense budget goes to landslide mitigation and clean up, but if they reinvest in water management, they can potentially reduce their most severe risks.
- *Mr. Eberle* asked who in an office deals with bundling across states. *Ms. Vajjhala*: Dan Carol, working with the Governor of Oregon, has a regional investment model for bundling. Check out the West Coast Infrastructure Exchange.
 - *Mr. Johnson* seeks a contact for someone to help work with multi-nationals and contracting opportunities. *Ms. Vajjhala*: Suggest reaching out to JIUS colleagues at the International Trade Administration Brazil desk at the Department of Commerce and the Select USA program.
 - *Sarah Diefendorf*: California just finished a document for the United Nations Development Business (UNDB), and in 100% of the 100 case studies, there had to be capacity building to service the financial tool and reduce risk. People need to buy into not having free energy, and then they need a payment structure to pay if they're convinced. *Ms. Vajjhala*: There have been a good range of case studies, e.g., local technical cases. In the JIUS, we have done capacity building at a few levels, e.g., job training is a long-term value of portfolio that is building a core of educated citizens who can continue the project. For example, the Inter-American Development Bank gave the State of Rio de Janeiro a grant to hire a team of people to develop the plans and financial models for a set of green districts. At the community level, part of what is happening in Brazil can be explained by the presence of its huge middle class. Therefore, electricity theft does not always mean that residents can't pay. We have to assess the revenue potential on a portfolio by portfolio basis—it's not one size fits all. And, we will only see successes with the right mix of people involved.
 - *Mr. Haskins*: How does what you're doing relate to EFAB and how might we contribute? *Ms. Vajjhala*: Some of our biggest challenges are getting the financial mechanism and institutional design mechanisms right. JIUS partners will take all the help they can get. It's a big stretch before Rio+20 (the United Nations Conference on Sustainable Development). We want to focus on economic and social benefits, not just the financial portfolio, and guidance from EFAB could have tremendous value.
 - In response to *Leanne Tobias*, *Ms. Vajjhala* said they have engaged the philanthropic foundation community. In fact, JIUS has been done with very little direct financing or grants from EPA, and some limited funding from the State Department. Instead, the government partners have served as catalysts to convene partners and make policy priorities and projects visible. Much of the rest of the work has been supported by foundations, including the Rockefeller Foundation,

which provided a grant to a Brazilian Foundation to begin and facilitate the initiative.

Report Out: Green Infrastructure (Water): Lindene Patton & Chiara Trabucchi, Work Group Co-Chairs

Ms. Patton: The Agency asked them to look at financing options for green infrastructure, and they began by trying to identify the limits for green infrastructure. The Agency is primarily interested in green waste-water solutions for storm water, and the area where the benefits of gray must be compared with green solutions. Documents were assembled, including sourcing from federal, state, and NGO, and organized for full distribution in preparation for the next scheduled call. In addition, the City of Philadelphia gave additional information about their report—what they wrote about and didn't, what needs to be done, special research needs:

1. Intersection of capital expenses versus operation and maintenance (green pushes). With gray infrastructure, it is easy to ignore green. We need to understand the legal and cultural barriers to arrive at long-term financing.
2. The impact of regulatory measures. Outline possible negative consequences of what green infrastructure might do.
3. How this can be done in the context of storm-water management, highway construction, and decision-making impacts, and how to adjust criteria for expenditures.
4. The importance to integrate green solutions into master plans.

The work group agreed to circulate a revised outline and research material before the next conference call (i.e., four to six weeks), and a draft document for the fall meeting.

Report Out: Energy Efficiency/GHG Emissions Reduction: Karen Massey & Ann Grodnik, Work Group Co-Chairs

Ms. Grodnik: The work group received a charge from Region I asking for information and guidance on finance for small and medium cities. Much information is available, but there is no “silver bullet” in the financing realm. The approach thus far has been to compile a checklist for each step in a retrofit process—implementation, financing, maintenance. A quick payback retrofit might offer an opportunity to speak with elected officials in the region; points were made about the lack of political will (This calls for clarification with Region I). The work group's first step is to reconvene and determine exactly who the audience is. We need to check in with the Region I contact; when we have the charge we will update the draft and share it with EFAB in the fall and finalize it for the spring meeting.

Ms. Massey: We have a preliminary draft and we need to compile the checklist. There is much information, but we want to see where value can be added. We have an extensive reference list and case studies to consider. It will be an evolving paper.

Q&A

- *Mr. Johnson:* The District of Columbia created a Sustainable Energy Utility, funding it with 2¢ per kwh. They went to 7,000 low-income apartments and changed all faucets to lower water usage, upgraded lighting to LED, retrofitted heating plants, and exchanged appliances to EnergyStar appliances. It is a program to work with homeowners, who pay \$100 for these services. There are implications for reduction of water and energy use. About 30% of electricity in Washington comes from energy-renewable sources, e.g., solar. In future, only renewable sources inside the city's border can be used. This involves energy, building materials, etc. for overall energy use in private, commercial, and residential buildings.

Water Technology Innovation Cluster: Jennifer Orme-Zavaleta, Director, National Exposure Research, Office of Research and Development, EPA

The Water Technology Innovation Cluster (WTIC) is an effort captured in the Water Program. The Agency's research needs far exceed what can be done alone, so the agency is trying to build a partnership with other agencies, the community, etc. to accomplish goals. This started with the Small Business Administration (SBA). We need more cost-effective technologies, especially for small systems. To deal with these problems, we can't use the same mindset that got us here in the first place.

Administrator Jackson and SBA Administrator Karen Mills announced 18 months ago the formation of the WTIC in the Cincinnati Region. EPA was to be a catalyst, wanting to spur economic development and create jobs; SBA wanted to help developing companies. EPA cannot continue the same level of support forever, so the question becomes how WTIC can take greater ownership and be more self-sustaining. The goal is to look at how they can solve water problems and create economic opportunities at the same time. This effort is consistent with several internal frameworks, e.g., EPA Technology Roadmap, the Office of Water's New Drinking Water Strategy, and the Office of Research and Development (ORD) Safe and Sustainable Resources and Sustainable and Healthy Communities research plans. We are trying to build it into the culture and what is being done with research programs and partnerships. EPA forged a partnership between EPA research talent in the Cincinnati region and outside people. EPA is also getting a number of EPA groups to work together more closely.

In the first year, EPA used a Small Business Innovation Research (SBIR) proposal to convene the Water Challenges Workshop, hold monthly meetings of the WTIC board, begin a website and branding effort, and deal with international attention, e.g., France, China, Israel, Singapore. WTIC interacts with many universities, corporations, start-up companies, support groups, and state, local, and federal governments. Governing has evolved to a part-time executive director with a small staff, and Confluence has been established as the brand.

They started with the Cincinnati region because EPA already has had a research presence there since the late 1970s, and there is a cadre of expertise in the region. The effort has received praise from water companies. It addresses how to better develop new

technologies and facilitate the process of moving from idea to market. This year, an internal ORD solicitation was designed to foster researcher relationships with start-up companies in the Cincinnati region and commercialization of EPA-developed technologies. It focuses on water treatment, monitoring, and IT issues.

Possible future opportunities might be EPA further leveraging WTIC to investigate technology push language in regulatory packages or using innovative SRF approaches. Upcoming WTIC and EPA actions include: policy technology discussion at the U. S.–Africa Business Conference in June, release of a STAR Grant Solicitation in FY2012/13, announcement of EPA-sponsored research, and a conference, “100 Years of Federally Sponsored Water Research” in May 2013. Other cluster activities include collaboration for environmental sustainability of southern New England, applying a systems approach—economy, society, environment—on nutrient loadings (both point and nonpoint), life cycle assessment, and water use for chemical manufacturing.

Q&A

- *Mr. Haskins:* One aspect is helping small business and local economy regionally and then forming other clusters regionally or more nationally.
Ms. Orme-Zavaleta: This initial effort is regional, but it’s open, e.g., Philadelphia is very interested.
- Ms. Surgeon asked about international efforts and whether there was technology exchange with other countries, e.g., Israel, South Africa, China.
Ms. Orme-Zavaleta: Some discussion has been begun, but the Office of International and Tribal Affairs also has established such channels, e.g., Australia has quantity technology and looks to us for quality technology. Many tools are available to us.
- *Donna Ducharme:* How did you decide this was the right strategy for this region? If you have a template, can you share it? Milwaukee also has a strong focus on water.
Ms. Orme-Zavaleta: Serendipity led us to begin in the Cincinnati region because people with the needed expertise were already there. Sally Guterrez (EPA/ORD Sustainable and Healthy Communities Program) and she want to lay out the approach and business plan in a generic mode so other regions and interests can use it.
Mr. Shapiro: Much of the work for 100 years of water research was done in Cincinnati, and the city shared its facilities with EPA, so it was a *de facto* partnership to use as a natural core to expand upon.
Ms. Orme-Zavaleta: They are working with the Office of Water to produce a how-to guide.
- *Ms. Tobias:* Will things from the Cincinnati area be useful in the forthcoming New England effort?
Ms. Orme-Zavaleta: Some efforts are underway and she would welcome information on any cross-links.

- *Ms. Massey* asked about the “technology push” in regulatory issues. *Mr. Shapiro* would say, rather, that they are looking at new regulations from a broader perspective to see how, by shaping regulations, they can encourage innovation and provide running room for different technologies. Most regulations are based on the assumption that we picked the best technology. We usually operate around performance standards, rather than picking a particular process. *Ms. Massey*: SRF is a great opportunity, but states are defensive about putting new requirements on the SRF. Here is an opportunity for pilot studies; SRF administrators would probably be willing to showcase their work.
- *Ms. Diefendorf*, as a former reviewer, observed that products chosen seem to be the unique rather than the economically viable. *Ms. Orme-Zavaleta* wants a blend of both cool and innovative products with practical and economically viable ones.
- *Ms. Peay* echoed the need for further collaboration. One thing they are striving for is additional flexibility to deploy. It is important to enhance collaboration. *Mr. Shapiro* will follow up and work with WTIC.

Public Comment

There were no comments.

Summary of Day 2 and Closing Remarks: Karen Massey & Mike Shapiro, Designated Federal Official

Mr. Shapiro: Good information was shared even where they didn’t have complete agreement. Follow-up items include:

- The Tribal Environmental Programs Work Group will draft a letter of support for the Administrator to work with the Treasury Dept to approve use of tax-exempt bonds for the Tribes. The letter is to be drafted with two key supporting documents. In parallel, due diligence will be conducted with the General Counsel’s office to be sure such a letter falls within the scope of EFAB’s role.
- The Transit-Oriented Development workshop will convene tomorrow, where they will collect insights and information, etc.
- The work groups on Drinking Water Pricing and Infrastructure Investment, Energy Efficiency, GHG Emissions Reduction, Green Infrastructure, and Clean Air Technology are all committed to having drafts for the next meeting.

The next meeting will be held in the fall, but no date has been selected. Preferred dates will be identified. The current plan is to have another version of the video teleconference format, but those who are planning to be in Washington, DC, anyway may be able to meet. A sub-option is the use of teleconference clusters.

The discussion on JUIS partnership, as well as cluster activity, suggested that EFAB may have an opportunity to work with sponsors of those projects. We will continue to work

with Ms. Orme-Zavaleta and Ms. Vajjhala, but first we must finish some projects already underway. Everyone is facing financing challenges. Mr. Shapiro was impressed with the work the EFCs are doing; there is an opportunity for EFCs and EFAB to support each other's efforts.

Ms. Massey thanked participants for their work on water pricing, facilitating getting new technologies on the market, and engaging the private sector, among others. *Vanessa Bowie* will send out possible fall meeting dates early in June.

Ms. Bowie reported that EFAB is actively recruiting for new members (now 23 with the loss of Mr. Mason), including a chair; the charter calls for 30. This will be announced in the *Federal Register*, but Ms. Bowie asked members to suggest people.

Ms. Peay thanked Ms. Massey for being willing to act as chair until a new one can be found, and *Mr. Shapiro* and the team for putting together a good meeting. She favors face-to-face rather than virtual meetings.

Mr. Cobb thanked Ms. Peay and Mr. Rittner for volunteering to serve on the Tribal Environmental Programs Work Group. He, too, favors a face-to-face meeting.

Ms. Tobias also favors face-to-face meetings because they facilitate discussion, and she and other members would be willing to help staff overcome barriers to convening them.

Ms. Surgeon thought having a workshop meeting the day after a board meeting was an excellent idea and thought other work groups should do this, too.

Mr. Shapiro adjourned the meeting at 3:15 PM.

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Heather Himmelberger, Albuquerque,
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Jeff Hughes, Chapel Hill, NC
Sam Merrill, Portland, ME
Kevin O'Brien, Cleveland, OH
Sara Pesek, New York, NY
Joanne Throwe, College Park, MD

Expert Witnesses Absent

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Members Absent

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Bicky Corman, Deputy Associate
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Jennifer Orme-Zavaleta, Director,
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Shalini Vajjhala, Special Representative,
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